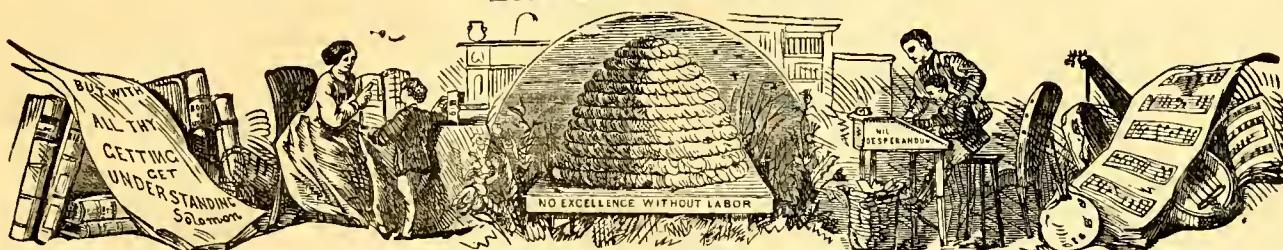


THE JUVENILE INSTRUCTOR.

HOLINESS TO THE LORD.



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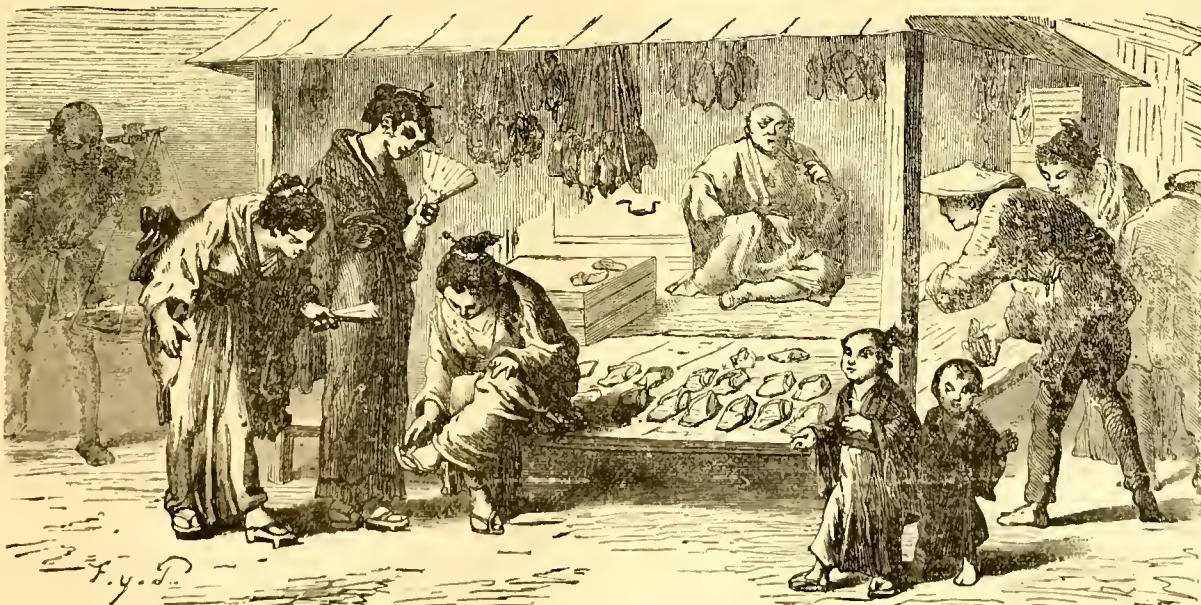
NO. 12.

A JAPANESE SHOE STORE.

HERE we have a picture of a Japanese shoe store. It certainly has no resemblance to the shoe stores that our young readers are familiar with. Indeed, it would be strange if it did, for there is the greatest imaginable difference between the people of this country and those of Japan, in customs, dress and appearance. If we were to go into a shoe store in this country we should expect to see boots, shoes, gaiters, brogans, slippers, etc., of various sizes, styles and degrees of quality. But if we were to go into a Japanese shoe store expecting to see the same, we should meet with disappoint-

ment by means of two or three cross pieces of the same material fastened under the sole. One traveler relates that he has seen clogs of this kind worn in Japan that would elevate the feet of the wearer at least six inches above the ground.

The Japanese always remove their shoes on entering a house, and wear only their socks on their feet in-doors. These socks are made in the shape of mittens, having a separate place for the reception of the great toe, corresponding with the thumb of the mitten. This is to admit of the sandal



ment. Their shoes, if they may be called shoes, differ, of course, in regard to quality and size, but not much in regard to shape. They do not cover the whole of the foot and part of the leg, as our boots do; nor even the whole of the foot, as our shoes do; but merely the sole of the foot, and are fastened on by means of strings or straps. They are simply sandals, somewhat similar to those used by the ancient Egyptians, and also by the natives of some of the Polynesian Islands at the present time. Some of them have pliable soles, made of straw matting, paper or such other light and cheap material. Others have soles made of wood, which in some cases are

being fastened to the foot by a Y-shaped strap or string, the fork of which passes between the first and second toe.

The shoes, or covering for the feet, worn by different peoples in various ages afford quite a curious study. The oldest style of which we have any record is the sandal. Those worn by the ancient Egyptians were made of palm leaves, papyrus or leather. Those of the ancient Hebrews were made of linen or wood, and in some cases, especially for soldiers, they were made of brass or iron. Shoes were not generally worn among the ancient Greeks and Romans, although some writers mention sandals made of gold, silk and other precious stuff, worn

by the ladies. But among the men of rank a very extravagant style of boot is said to have been in use. They were made with high tops, sometimes covering the whole of the leg. The tops were frequently made of the skins of wild animals, laced up in front, and ornamented with the head and paws of the animal, hanging down in the front in a flap. These skins were sometimes dyed purple or some other bright color, and adorned with imitations of jewels, etc. These shoes, or, more properly, boots, were made open at the toe, so that the front of the foot was generally exposed. Another kind of ancient shoe was made entirely of wood. They were formerly very common throughout Europe, and, indeed, are worn to a considerable extent in several of the European nations at the present time, and we even see them worn occasionally in our Territory by some of the "old country" people.

Malliot, who is considered good authority on antiquities, states that "the ancients had shoes with divided compartments, like gloves, for the toes."

The most absurd fashions in regard to shoes prevailed in England during the middle ages. Shoes of different colors were then in vogue, as well as stockings of different colors, and varying from those of the shoes. Fancy how a man would look with a yellow stocking and a blue shoe on one foot and a black stocking and a red shoe on the other! Such sights were common in England in that age. Then, afterwards, long pointed shoes became fashionable. It is said that they were first introduced by a stylish courtier named Robert, surnamed the Horned, during the reign of William Rufus. He wore shoes with toes long and twisted like a ram's horn. Of course they were strongly denounced by many, but that did not prevent them from becoming fashionable. They even greatly increased in size, so that three hundred years after they were invented they had attained to such dimensions that the points bent upward and reached the knee, and were fastened to it by golden or silver chains. To add to the absurdity of their appearance, the upper parts of them were cut to imitate the windows of a church. After the pope and other church officers had tried in vain for centuries, by issuing bulls and declaiming publicly to check the fashion, an act of parliament was passed in 1463 prohibiting shoemakers from making shoes for the "unprivileged classes," with points more than two inches long. Thus curtailed in length, they commenced growing in width at the toe, until they reached such enormous dimensions that during the reign of Queen Mary another edict had to be issued, restricting the width to six inches. Later still, they were made with huge wide spreading tops, so large that they greatly impeded the movements in walking. These tops were sometimes adorned with lace.

Even after the present style of shoes came into use there, which occurred in the early part of the 17th century, fashion ran to great extremes in the matter of ornamentation. They were frequently adorned with colored silk embroidery, spangles, etc., but the most general and conspicuous ornament was the buckle, sometimes made of gold, but more frequently of silver, and quite large, looking almost like huge salvers glistening on the tops of the feet.

The strangest notions in regard to the feet and the covering of the feet prevail in China. A lady in China is admired for the smallness of her feet. To secure this admiration a great proportion of the Chinese women check the growth of their feet. The operation is begun at a very early age, so that the feet of the full-grown woman may not exceed in size that of a child of five or six. Bandages are bound firmly around the foot in such a way as to force it into an arched

shape, the heel being pressed forward and the ball of the foot backward, while the four middle toes are bent under the foot, and so completely squeezed into its substance that they almost lose their identity. In fact, the member is made artificially into a club-foot, which, repugnant as it may be to European eyes, is the delight of the Chinese, who call it, metaphorically, by the name of "golden lily."

Fast walking is impossible with these feet, and running is out of the question, the women being obliged to support themselves by holding to walls or other objects, or to balance themselves by holding out their arms at right angles to their bodies.

The deformity does not end with the foot. As the toes and ankles are deprived of motion, the muscles which work them, and which form the calf of the leg, gradually dwindle away for want of use, so that from the ankle to the knee the leg is scarcely thicker than a broomstick.

Utterly hideous as is this deformity, it is coveted by all, and those who do not possess it try to look as if they did. This they achieve by making an artificial "golden lily" of wood, putting it into a fashionable shoe, and fastening the contrivance on the sole of the real and serviceable foot.

The shoes worn by Chinese ladies are often quite elegant and costly, being beautifully embroidered with gold and silver thread and colored silk.

SUNDAY LESSONS. FOR LITTLE LEARNERS.

HISTORY OF JOSEPH SMITH, THE PROPHET.—LESSON LXXVI.

Q.—What occurred shortly after Dan Jones had started to Quincy with the letter?

A.—There was a rustling at the outer door of the jail, and a discharge of fire arms.

Q.—When Elder Willard Richards looked through the window, what did he see?

A.—He saw about a hundred armed men around the door of the jail.

Q.—What did some of them do?

A.—Some fired in through the window, and others ran up stairs, burst open the door and began firing.

Q.—During this excitement, what happened?

A.—Hyrum Smith received several shots, and as he fell, he said, "I am a dead man."

Q.—Who was the next that received injury from these murderers?

A.—Elder John Taylor was shot five or six times, and severely wounded.

Q.—When Joseph saw there was no safety for him in the room, what did he do?

A.—He sprang into the window, intending to leap from it to the ground.

Q.—What happened to him at that moment?

A.—Three balls pierced his body, and he fell outward into the yard, dead.

Q.—What did he exclaim after he was shot?

A.—"O, Lord, my God!"

Q.—Who was near him in the room, and heard him say those words?

A.—Dr. Willard Richards.

Q.—What was done with his body after he fell from the window?

A.—It was lifted up and leaned against the curb of the well.

Q.—What did Colonel Williams order to be done to him?

A.—He ordered four men to shoot him.

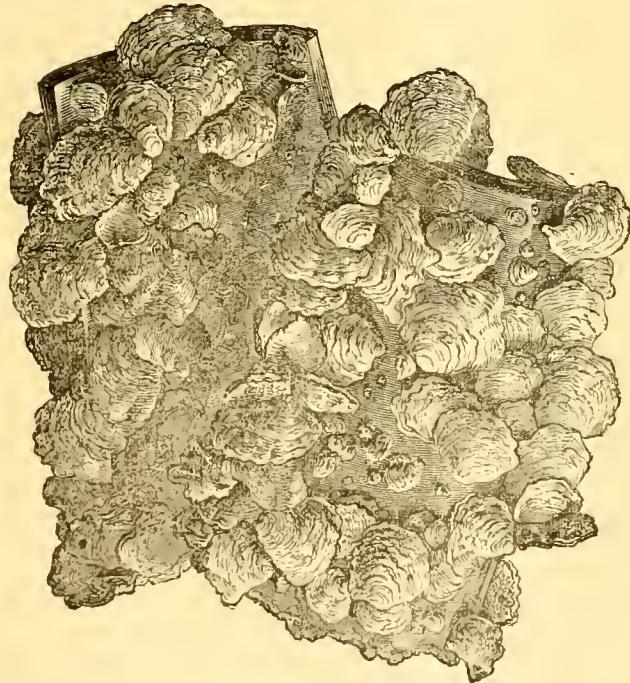
Q.—Did they do as they were told?

A.—Yes; they stood about eight feet from him, and all fired at once.

OYSTERS.

LOW down, comparatively, as the Oyster may be in the order of this glorious creation, it is an object of interest to millions of the human family, and it has been so for many centuries on account of its nutritious qualities and digestibility. Ages ago, the Oyster was a theme for the poet. Its praises were sung in classic song and story—perhaps after the poet had indulged freely in partaking of the delicious bivalve.

Long before that period, which dates back to the time when Rome was young, the Oyster had been the principal food of primitive man, as attested by the shell heaps in various places. And we have abundant evidence in these Rocky Mountains of the even earlier antiquity of the Oyster. Perhaps our readers may not yet have learned that many of the fossil Oysters of our southern country contain a mud rich in silver. When the Oyster of those very remote ages died it gradually decomposed, and as it did so it vacated its shell, when its place was immediately taken by silver, precipitated from the ocean of those days.



With the increase of our cities in opulence, the Oyster in its natural state is not uncommon, and for many years canned Oysters have been among our delicacies.

Here we have a picture representing a group of Oysters of various sizes and ages, attached like limpets to pieces of wood. Not strictly like limpets, either, for they cling to rocks by suction, but the Oysters securely fasten themselves by a calcareous cement. Many of the Oysters here shown are very small; they are such as professional oystermen would call "spat." We have nothing to compare them with; but there is no doubt the artist intended us to consider the largest figures as those representing full grown Oysters.

Oysters are not "spawned;" they are born into the water alive. Naturalists tell us some very amusing stories about the juvenile Oysters—the "spat." They are thrust out of the parent shell in a most unceremonious manner, to get their living the best way they can. But even here we see the goodness and wisdom of the Being "who doeth all things well." The appendages really necessary to the preservation of the "spat" while in the larval state, serve as sustenance for the

helpless but voracious little creature when it has taken up a location, as we see some of the creatures have done on these pieces of wood. This is by no means a new feature in the history of the lower animals. The respiratory organs, or gills, of the batrachia undergo absorption probably in the same way that those of the "spat" do. The tiny Oyster is dependent for means of locomotion as well as breathing upon the frill-like appendages attached to it during its early existence, as well as using them as feelers after food, in the same way that tentacles are used.

No sooner does the tiny Oyster secure itself to a suitable mooring than it begins to build up a shell. The internal organs are developed. At a month old it is the size of a large pea; at six months it is an inch or more in length; at three or four years old it is fit for the market.

The Oyster lives between two shells, or valves, which increase in size as the animal does. These are secured together by a hinge and by a powerful muscle. When we open an Oyster with a knife, this muscle is cut through. The animal can then be seen and its structure examined. The mantle is that outer part, generally called the beard. The mouth is at that part of the body near the hinge. The use of the muscle alluded to is to close the shell, as the hinge is provided with an elastic appendage which pushes it open. Thus, we find the Oyster opens when the animal dies, as the muscle then ceases to perform its functions. While it lives it can open and close the valve so as to imbibe food. This shows that it has voluntary or will power; and naturalists have shown that, although the Oyster has no head, it has a nervous system, and that it is adapted to its position, as, indeed, every creature is that God has made.

It would be exceedingly interesting to describe the companions of the Oyster, its structure, how it enlarges its shell, and even repairs it when it is broken; to tell of the beautiful life-forms that take up their abode in the vicinity of, and even upon, the shell; how the creature draws in the water and collects the spores of sea weeds to nourish its body; of an apparatus, as sensitive in degree as our own lips are, to detect any particles which would wound the internal parts, and prevent them from entering the mouth; to describe its mantle, or pallium, with which it enfolds itself, and with the fringe-like edges of which it creates an eddy in the water to draw in the fluid to subsist upon; to tell how, without eyes, which would be useless to it, it has a perception of all that surrounds it which is likely to endanger its existence. But as it is the intention to exhibit figures of some of the "bryozoa," and other living beings which dwell in the vicinity of the Oyster parks, another opportunity will be given for exhibiting the structure as well as describing the habits of those singular and interesting creatures.

HINDOO PROVERBS.—Beware of errors of the mouth. Do not meddle with clandestine affairs. Do not publish people's defects. Do not change what you have said. Do not revile wise men. Be most cautious with respect to superiors, relations, and the dead. Do not go to sleep early and rise late. Do not neglect your own field and plow your neighbor's. Do not run too fast after gain. Do not learn to do that from which there is no advantage. Be most on your guard against having the body present, but mind absent. Do not make a difference between the noble and the ignoble. Living or dying, be the same. Let the meritorious and defective mutually advise.

THE GOSPEL PRINCIPLES.

BY DANIEL TYLER.

THE GATHERING DISPENSATION.

THERE never was but one dispensation that was not a gathering dispensation. In the commencement of the Christian era those who embraced the gospel did not gather together. This was because they could not. They made an effort to live as a united body, under the directions of the Apostles in Jerusalem, but after the death of Ananias and Sapphira this order of things was broken up, and no one sought a temporal union after. They were content on the one hand to look after their own varied interests; and, on the other hand, the persecutions without and discords within were such that it was not possible for them to live in large bodies together. Yet the Apostles looked forward to a period when there should be a "dispensation of the fullness of times." In that dispensation all things that were "in Christ" were to be gathered in one.

The great dispensation which was to exceed all others, is referred to in the Lord's prayer as the kingdom of God, wherein His will is to "be done in earth, as it is in heaven."

In the 21st chapter of Luke, Jesus speaks of this same kingdom as one of the signs of His second coming. From the 5th to the 24th verse He speaks mainly of the signs which were to precede the destruction of Jerusalem. From the 25th to the 36th He speaks of His second coming, and says that all the signs, including the setting up of the kingdom of God, which shows that the church must be gathered to form a kingdom, should all take place in the generation in which He would come; that is, the generation who should be then living would not all pass away until all should be fulfilled. By this we may perhaps infer that the most of those living when the signs began to show themselves would pass away, but a few would remain until all was fulfilled. It needs no argument to prove to us that the signs spoken of here have been showing themselves for more than forty years, and that they are every year more visible. In this generation, then, we must look for the kingdom of God. When we find it, as was shown in a former article, we must find Apostles at the head and all other grades of priesthood, the same as delineated in the 4th chapter of the Ephesians, 12th chapter of 1st Corinthians, and other places in the scriptures.

The Church of Jesus Christ of Latter-day Saints is the only church in all the world that has all the offices and gifts in it. It is the kingdom spoken of.

John the Revelator, in the 14th chapter and 6th and 7th verses of his prophecy, shows that this new and last dispensation should be ushered in, in the midst of the signs spoken of, by the administration of a holy angel. This was fulfilled when the angel Moroni delivered the plates, from which the Book of Mormon was translated, to Joseph Smith, and when he exhibited them to the witnesses, Oliver Cowdery, David Whitmer and Martin Harris. The kingdom spoken of is the same as that figuratively represented by a little stone, in Nebuchadnezzar's dream, mentioned in the 2nd chapter of Daniel. The little stone, represents the rock of revelation, upon which Christ said He would build His church—by which the prophecies will be fulfilled, and the dispensation of the fullness of times accomplished; when "the knowledge of God shall cover the earth as the waters cover the great deep."

John says, in the 18th chapter of the Revelations, "I heard another voice from heaven, saying, Come out of her, my

people, that ye be not partakers of her sins, and that ye receive not of her plagues." The whole burden of scripture, ancient and modern, shows the last dispensation to be one of gathering the righteous to escape the calamities which are to befall the wicked and to learn the ways of the Lord in His house (see Micah, 4th chapter and 2nd verse, also Isaiah, 2nd chapter and 3rd verse).

FROM THE SANDWICH ISLANDS.

ELDER JOS. H. DEAN, who is now on a mission to the Sandwich Islands, has written a letter to his former teachers and schoolmates of the 19th Ward Sunday school, from which we are permitted to make the following extracts. The letter is dated Laie, Oahu, Sandwich Islands, May 10, 1878.

"We were eleven days on the journey from home to Honolulu—two from Ogden to San Francisco and nine on the sea. Landed in Honolulu Dec. 28. We enjoyed the journey very well except the sea sick part of it, which was disagreeable enough. You boys think, no doubt, that you could ride in a ship without getting sick. Yes, and so did I, but I was disappointed. I was vomiting to the best of my ability before we had been started an hour. The great ocean is not like the Warm Spring Lake, you know. You can ride in a boat on the Lake without difficulty; but when you get in a boat about the size of the 'Big Co-op,' and ride over waves nearly as large, the case is different. But, you know, you can get accustomed to most any thing, and so we, before the nine days were up, got used to the rocking of the vessel. In fact, when I got on land again and tried to walk, I felt almost as awkward as I did when I first tried to walk on the deck of the ship, with this difference, that I did not bump against so many ladies and sailors. Just think how you would feel to be walking past a nicely dressed lady, when all at once the ship gives an unexpected lurch and you bump up against her like a big ox, and nearly knock her overboard. Or, standing with your hands in your pockets, looking at the sailors, you get pushing them around in the same impolite manner. I soon found that I could not trust myself in company without holding on to ropes, or the railing of the ship.

"Well, we are about three thousand miles from you; on another land, with a different climate; among another people, who speak another language, eat different food, wear different clothing, and who live in different kinds of houses to those you see at home. The mountains are of a different shape, and covered with different kinds of trees and bushes; and even the rocks are different. There are no smooth pebbles, such as the boys use at home to throw at birds; no sandstone, granite, or any other kind but black, porous lava rock, which has been thrown out of the bowels of the earth at some far distant day by volcanic eruptions.

"These changes, together with a change of occupation, made things seem rather strange at first; but we soon got accustomed to them. Now, this seems about as much like home as Salt Lake did. Of course there are hardships and trials here, as everywhere else; but with a conviction of doing right and a determination to serve God and to look on the 'bright side' of things, I find that we can be as happy and as contented here as on any other spot of the earth. We have sunrise and sunset, morn, noon and night, as you have, and though we are deprived of the society of our relatives and friends, brethren and sisters, for a season, we have the

comforting influence of the spirit of God which can more than compensate for all other losses.

"When we left home (Dec. 12) the weather was cold and snow was on the ground; but when we reached Honolulu (thirty-three miles from here) the thermometer stood at 75° in the day and about 10° lower at night. Trees, bushes, flowers and other vegetation looked as fresh and green as at home in June; and everything had the appearance of spring. It is just the same now, and we have been here over a third of a year. Orange, banana, and other tropical fruit trees are always blossoming and always have fruit on them. I have seen orange-trees with blossoms, green and ripe fruit on them at the same time. They cannot raise apples, plums, pears, apricots, peaches, etc., here on account of the warm climate all the year round. As they are always blossoming and bearing, they soon 'give out,' and are worthless. Neither can they raise wheat, oats, barley or corn, nor vegetables such as peas, beans, onions, etc. The grains, on account of the continuous moisture and warmth, all run to straw, and the vegetables to stalk. Onions grow the same size all the way up; they look like long onion stalks, which, indeed, they are, with a few roots hanging from the bottom. They do not raise potatoes, that is, potatoes like we have at home; but they raise plenty of sweet ones. These taste to me like frozen Irish potatoes after being boiled, or a little better probably; but I don't like them much.

"Well, now I have told you some of the things they do not raise, you will wonder what they do raise, I suppose, and what the people do for food. They don't eat bread, cake or pie, roast potatoes, meat pies, preserves, etc. Their food consists of poi (poy), dog-meat, pork, beef, and fish, with sweet potatoes. I guess you said 'Oh!' when you heard 'dog-meat,' but they eat it, nevertheless, and prize it very highly. And why not eat 'dog' as well as 'hog,' I think one is as clean as the other.

"I suppose you wonder what 'poi' is, so I will tell you. They cultivate in wet, marshy ground, a turnip-like root called 'kalo.' When full grown, it is cooked in an underground oven. It is then taken out and pounded to a thick paste with a rock, and mixed with water. After standing a day or two and fermenting it is 'poi.' This is the Hawaiians' bread, constituting their principal food. It tastes peculiar to a foreigner at first, but he soon gets a liking for it. When we travel among the people we live principally on it. Sitting, tailor-fashion on the floor, with the large dish in the centre of the crowd, all dip in with the fingers, if they happen to have no spoons.

"Their houses present a peculiar aspect to one that sees them for the first time. My first impression was that they were a lot of hay-stacks. They are made of long grass, overlapped like shingles. These make quite comfortable houses when well ventilated. They have no furniture in their houses, other than mats to cover the floor; these are their beds, chairs, tables and sofas. It is considerate of a punishment for natives to sit on seats for any great length of time. At long meetings they sit in the aisles or between the benches if there is room.

"These people are great fishers. They have a great many ways of catching the different kinds of fish. Some are caught with nets; others are deceived with a bait made of ivory, which they swallow thinking it to be a little fish, and get caught themselves by a hook fastened under the bait for that purpose. They catch others with the hands. When they want to kill a fish they crush its head between their teeth.

"After fishing until he gets hungry, a native will come to the shore and eat of his fish until he is satisfied. I saw one unfortunate fish protesting against this treatment by wagging part of his tail, (the other part was in the native's mouth). They also eat shell-fish, shrimps, crabs, sea-weed, and a great many other such things. In traveling among them we have to forget our fancies, likes and dislikes, and imagine every thing clean and tasty, or we would often go hungry.

"The Sandwich Islands are thirteen in number, only six of which are inhabited. There are about 35,000 or 40,000 inhabitants in the kingdom. The largest and capital city is Honolulu, which contains, I should think, about 10,000 inhabitants. The report at our last conference here (April 6) showed that the members of the Church in this kingdom numbered about 4,000. The laws of the kingdom forbid them emigrating, therefore this has been appointed as their gathering place. Those that are now in Utah have had to get special permits from the government before they could leave.

"The natives support themselves here by working on the Church plantation. It requires three of the brethren here to attend to the affairs of the mission and superintend the planting of cane, raising, grinding and making it into sugar. I have been here ever since we arrived with the exception of two weeks, so most of my mission so far has been in a working capacity. On this account I have not succeeded so well in learning the language as I would have done if I had traveled among the people all the time and had no white person to talk to; but as it is, I think I am getting along pretty well. I can generally make myself understood; but, in whatever way the language is acquired, it is a pretty hard task to learn a new name for every thing, and to put your sentences together in the opposite manner to what you would in the English language, which you have to do in this.

"I have preached four or five times in the native language, my sermons occupying from one to two or three minutes. I have assisted in administering the sacrament twice, dismissed meeting twice, and have baptized twelve persons.

"I often think of the Sabbath school, of the good instructions I have received there, the sweet singing of the children, and the good peaceful influence of the Holy Spirit that was always present. Though I am many miles away I can look back, as it were, and see you all in your old places.

"I can truly say that the Lord has greatly blessed me so far, and I know that if I do my part in the future He will continue His blessings. I am glad I am here, I feel happy and contented, and have never yet been sorry I was called."

WHEN you have had success and prosperity and social consideration, if your success is turned into defeat, and your prosperity departs, and your social relationships are broken off, learn how to stand sufficient in yourself without these things. Learn first how to be a man by sympathy, and then learn to be a man without sympathy.

THE weakest point in every man is where he thinks himself the wisest.

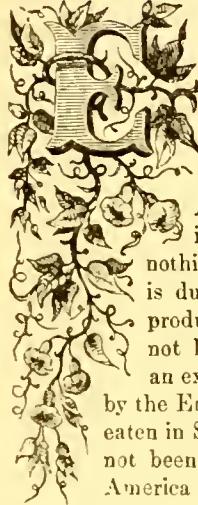
REMEMBER always that labor is one of the conditions of our existence.

The Juvenile Instructor.

GEORGE Q. CANNON, - - - - - EDITOR.

SALT LAKE CITY, JUNE 15, 1878.

EDITORIAL THOUGHTS.

EVERY nation has some peculiarities about diet. Even England and America, kindred nations, speaking the same language and having constant intercourse, do not relish always the same dishes. There are many things used in England for food which are considered unfit to eat in America, and there are many articles used in America of which the English know nothing, and for which they have no taste. This is due to the fact that the climate of America produces many articles in profusion which could not be grown in England. Cornmeal, which is an excellent article of food with us, is not eaten by the English. Oatmeal, which is very commonly eaten in Scotland, Ireland and parts of England, has not been esteemed as an article of food for man in America until quite recently. People generally thought it was only fit for horses to eat, but a noted naturalist by the name of Agassiz, who lived in the Eastern States, brought oatmeal into repute and made it fashionable, because it was a favorite dish of his, and, as he was a man of brains, many people thought it would be quite proper for them to follow his example. Of late years, therefore, oatmeal is quite a common dish in hotels in the east.

The Chinese are credited with eating almost everything that lives. It is said they can make excellent dishes out of rats. The empire is so populous that no doubt everything that can be eaten is economized.

The Hindoos will not touch meat. They do not believe in taking life; but there are others not far distant from them who not only eat the flesh of animals, but esteem human flesh a luxury. A strange taste, for men to crave the flesh of their fellow men! On many of the islands of the Pacific the natives are said to devour the flesh of their enemies. The reason assigned for this is that they think it will make them brave. Our American Indians have been known to eat human flesh, not because they were hungry, but for the same reason—they thought that the eating of the flesh of their enemies would make them brave warriors.

The Sandwich Islanders have been charged with being guilty of cannibalism, and it is said that they devoured Captain Cook, who was killed on the island of Hawaii; but the natives themselves deny this, and say that his heart was eaten by mistake by two boys who came into the house in the night where his heart was in a calabash. They, supposing it to be a dog's heart, ate it. It was, however, the heart of Cook, the great navigator. On the Sandwich Islands, as well as among our Indians, dog meat is very frequently esteemed as a great delicacy. On the Islands they have a peculiar breed of dogs which they formerly raised for the purposes of the table. They took great pains in feeding them, and they were naturally far more cleanly in their habits than hogs are.

On one occasion a number of white merchants were invited to a feast by the Islanders. There were roast pigs and roast dogs prepared. Some of the young half whites, for mischief and to play a good joke on the white men, took the heads of the pigs and put them on the platters where the dogs were, and the heads of the dogs and put them on the platters where the pigs were. They told their companions what they had done, and the natives were very careful to eat the meat where the dogs' heads were, that is, the pigs', and to leave the other meat for the white merchants. As the feast progressed they invited them several times to partake of their dishes, and said how good the meat was, and that if they would taste it they would find it as sweet as the meat they were eating. But the white men resolutely refused to partake. When the feast was ended, however, you can imagine their feeling when they were told that they had been eating dog meat. They would not believe it until they were shown the bones and the difference was pointed out to them between the bones of the pigs and those of the dogs. All affirmed, however, that the meat was sweet, and that if they had not been told they never would have known the difference between it and the young pork.

In the East Indian Archipelago there is a race of people who are called Battas, who are cannibals. They live in a country where there is an abundance of all kinds of food necessary to sustain life, and therefore are not cannibals from want of other food. Neither are they cannibals to satisfy revenge, but chiefly to gratify their appetites. Horrible stories are told about the manner in which they satisfy their appetites in this repulsive manner. They give a curious account of the way they became cannibals. Many years ago one of their chiefs committed a great crime. It was evident to all that he ought to be punished; but he was a great prince, and who dare take the responsibility to punish him? This was a subject of considerable consultation. Finally, they hit upon the idea that he should be put to death and they would all eat a piece of his body. In this way they thought each would take his share in punishing him. During this feast, each one, to his astonishment, found that his piece was a most palatable morsel. They had made a discovery, namely that human flesh was exceedingly sweet, and they all agreed that whenever another convict was to be put to death they would again gratify their appetites in the same manner. Thus, they say, arose the custom which has been handed down to the present day. Whether this story be true or not, the custom is a most horrible one, and one is moved with pity to think that human beings can become so degraded and utterly lost to all humane and proper feelings. But when men give way to their appetites and sink into ignorance there is scarcely any depth of degradation they cannot reach. We can see this in the Lamanites who are around us. They are descendants of intelligent people who knew the Lord and were favored of Him; but see how terribly degraded they have become!

How thankful we should be, children, for the knowledge which the Lord has given unto us! We are not at a loss to know what is good for us for food, for the Lord has taught us. Let us endeavor to put to a right use the advantages which we enjoy.

SINCERITY.—It was a saying of Seneca, "So live with men, as if God saw you; so speak to God as if men heard you; regulate your actions by this golden rule—then shall you acquit yourself nobly and conscientiously both to God and men."

THE FIREMEN.

BY G. M. O.

FIRE, as a servant and friend, is useful and agreeable, as a master and an enemy, it is a tyrant and destroyer, which

being destroyed, and daily the papers announce that property worth thousands of dollars has been swallowed up by the devouring flames. The fire losses of one year, in the United States alone, amounted to over \$40,000,000. Of these, about \$3,500,000 were in the city of New York, and over \$5,000,000 in the city of Philadelphia.



requires, in the United States alone, a standing army of more than 300,000 firemen to watch and fight. Great conflagrations are almost constantly occurring in some part of our country, and the record of the fires which daily happen in the world would fill a volume. Some days we read of whole villages

In consequence of the danger and frequency of fires in villages and cities, means are usually provided by local governments to prevent them and combat the fearful destroyer. This is done by the organization of a certain body of men with the proper appliances, and denominated the "fire depart-

ment. These departments are usually under the control of an officer, appointed by the proper authorities, who is styled the chief engineer, or chief of the department.

For many years the fire departments of the United States were conducted on what is called the volunteer system; but twenty years ago, in consequence of the many large conflagrations occurring, some of which were more extensive than had ever been known before, greater attention was devoted to the organizing of fire departments. Then followed the introduction of all the appliances and improvements that modern science could invent. Among some of the first great improvements was the disbanding of the volunteer companies and their hand engines, and the organizing of a paid department, with the introduction of the steam fire engine.

The cost of maintaining these fire departments is as varied as the different localities in which they are organized, and depend greatly on the size of the city or town. We give the report (1877) of two cities as samples. New York, \$1,800,000; Salt Lake City, \$3,000.

Quite a lengthy article could be written describing the various rules that are adopted and the ways and means that are instituted for protection against loss by fire, and the many noble deeds that have been performed by the gallant firemen, too often, alas! at the cost of life and limb.

Our readers will recognize by the peculiar shaped helmet, that our picture represents a London fireman, in the good work of rescuing a couple of little children from a horrible death. The oldest form of fire-escape in London was nothing but a ladder. Every parish in the city was formerly compelled by law to provide these "fire-ladders," as they were called, constructed of various lengths, and kept in some accessible place by the parish church.

Various modifications of the ladder were at first used, such as cradle baskets, attached with ropes and pulleys, for the purpose of lowering down infirm persons and children. Sliding lengths of ladder were also added to reach increased elevations. A form of "carriage ladder" was invented as long ago as 1809, which has been improved upon by the addition of "top" and "fly" ladders, canvas sheets and other mechanical contrivances, that have resulted in the almost perfect fire-escape now used in nearly all the large cities of Europe and America.

The public fire-escapes are placed about half a mile from each other over the greater part of London. Each machine is attended by a trained conductor, who is on duty from eight p. m. to seven a. m. It is but very seldom indeed that any aid is required to save life at fires before or after these hours. The conductor must be ready at a moment's notice to conduct his escape to any house on a "call," or alarm, being given him. The fire-escape stations are so much more thickly planted in London than the fire engine houses that in most cases the escape is nearer to, or arrives at the fire before the engine. Of course, on arriving at a fire, the duty of the "escape-man" varies according to circumstances. In the majority of cases the inmates are able to escape before the fire cuts off their retreat; but, even then, unless the conductor feels convinced from good authority there is no necessity for it, it is his duty to enter the burning building and ascertain if any one is left in the upper rooms. This searching is sometimes more dangerous than the direct efforts to save life where the work lies plainly before the men. The smoke is so dense that the lamp which they carry is unable to burn; and it is only by crawling along the floor where the fiery vapor is less noxious that they are able to make their way through the

rooms. The firemen usually carry along a rope in their hands called a "life line," made fast to the top of the ladder, which is a guide to them in finding their way back, as that is sometimes no easy matter. In most instances at bad fires they have a comrade; but in many cases they are dependent only on the police for assistance.

We have on record that on one occasion one of the best firemen, who had already won four medals for saving life, had made his way up a burning staircase to save the life of a little boy who had been left in a top room. On coming down with the child in his arms he sank exhausted on the stairs, and was rescued by a powerful comrade who was waiting as in duty bound to render any assistance required. The latter carried them both out in safety.

The fire-escape men of London, as a body, are as fine a set of men as anyone could readily meet with; and experience has proved that sailors, especially men-of-war's men, always make the best fire-escape conductors. Their long continued habits of submission to discipline and the education received on ship-board eminently fit them for the position. The life of the firemen is a waiting life. Men are required who are content to remain a long time passive, and yet always ready; ready at a moment's notice to exercise the highest qualities of tact and energy.

If there is any time in which a person should be cool and calm, in perfect command of himself, it is when he discovers a fire that threatens the destruction of life and property. A fire which, at its beginning, could be smothered with a pocket handkerchief, or dashed out with a bucket of water, neglected a few moments lays in waste millions of dollars worth of property. The first thing to do is to learn precisely where the fire is, the second to consider the chances of extinguishing it. Of course in cities an alarm should at once be sent out, and at the same time vigorous efforts made to put out the fire with the means at hand; for sometimes what the firemen are unable to accomplish in an hour after reaching the scene, may be done by one or two cool persons who act promptly before the flames have gained headway.

A person should not be alarmed on account of smoke. Frequently there is a great deal of smoke before the fire has made much progress. Remember that one can pass through smoke by keeping the head near the floor, or enveloping it in a wet woolen cloth. On entering a room to fight a fire single handed, keep the door closed behind if possible. A pail of water and a dipper in the hands of a resolute person can work miracles at the beginning. If the fire has progressed too far to admit of this course, and it is necessary to depend on outside help, then see that every door and window is closed. By so doing, where there is a fire engine in the neighborhood, it will be often possible to confine the fire to one room. The example and direction of a single cool and collected person at the commencement of a fire is invaluable. A bucket of water properly applied may be worth more than a steam engine. Cut off, if possible, all drafts and currents of air, and avoid all loud cries and unnecessary noises or excited gesticulations. Be cool, quick and persistent. Where water cannot be procured, mud or sand may sometimes be successfully used; indeed, it is claimed that sand is better than water for extinguishing kerosene, or other oil fires.

When certain that a building cannot be saved, efforts should be made to remove the contents. Here the utmost coolness and intelligence should prevail. Furniture, mirrors and pianos which cannot be removed without being broken in pieces and destroyed, had better be left to burn, that any suspicion of

their wilful and unnecessary destruction may be avoided. Little, if anything is ever saved by throwing articles out of windows. In case a barn or stable is on fire, the animals within should be removed at once. Do it in the ordinary manner, without noise or excitement. If they appear restive, blindfold them with your coat, or an empty grain sack, or cloth. Animals will sometimes rush into fire; not because they love it, as some suppose, but simply because they are frightened.

Chimney fires may be extinguished almost instantly by throwing salt on the fire. The process of burning salt evolves muriatic acid gas, which extinguishes flame. These are old rules, and have been often published. Above all things remember, in case of fire, to keep cool, and have your wits about you.

THE CONTRAST.

BY JOHN MORGAN.

AN Elder traveling sees many things that remind him of the contrast between the surroundings of the children of Zion and those who are being born and brought up in the midst of the sin and wickedness of Babylon. Especially is he reminded of the confusion that exists in the world in regard to religious ideas, in the large cities where vice holds supreme sway, and wrong-doing is the rule and not the exception. A person can form no conception of the terrible condition of affairs unless he can see and hear for himself. In one city that we passed through, owing to the trains not connecting, we were forced to stop over night; and after supper we walked out an hour over the city. Dancing in beer halls, drunkenness and carousing could be distinctly heard as we passed along the side walk, while not a stone's throw from the same point we heard the deep, long drawn tones of a man's voice, in prayer. On approaching the door, we discovered it to be a collection of thirty or forty people bowed down in the attitude of supplication, while the man leading the prayer was asking that the Holy Ghost should be poured out abundantly upon them. How strange it seemed to us to see side by side such wickedness and at the same time men striving to obtain the spirit of God! Then, as we walked along, looking at the massive stone churches whose steeples, pointing skyward, cast lengthened shadows upon the ground, we thought of the hundreds of little children who would flock to these churches on the morrow to be taught. Some to be taught one way and some another; so that if a class were taken from each church and put into a room where they could hear a chapter from the Bible read, and then asked as to the meaning of it, they would give as many different answers as there were Sunday schools attended. And should a Sunday school scholar ask his or her teachers whether they knew for themselves that the doctrine taught was of God, the reply would be "No! We hope these principles are true; we believe they are true; but as for a knowledge that they are true, we have none. We do not believe that God reveals to us to-day the truth or untruth of a doctrine. We are forced to trust to the written word, and to the traditions of our fathers."

How different it is in Zion, where the living oracles of God reside, and possess the power to know the mind and will of our Father in Heaven! Not only that, but the people also have the same privilege to know whether a doctrine is true or false, and even the Sunday school children may be taught by

the Holy Spirit of God in answer to prayer if they will pray without ceasing.

How thankful the children of Zion should feel that all the teachers in the schools of the Saints teach the same; that the scriptures are interpreted and points of doctrine explained the same in all parts; that there is no inconsistency in their teachings, but that there is order and harmony through them all.

The result of this uncertainty on the part of the world is growing and fastening itself upon the minds of the young, until to-day there is growing up a nation of infidels, who know not God nor the plan of salvation. A gentleman on a railroad train said to us, in reply to a question as to whether he thought we could sell some of our books to the passengers, that the people did "not want religious books, and would not buy them."

Sunday school children in Zion, strive to gain a knowledge of the things of God from the books written by the servants of God; and thus fit and prepare yourselves for the great destiny God has in store for us as a people. You will need all the knowledge you can obtain, as well as the spirit of the Almighty, to enable you to combat the false teachings that are abroad in the world, and to successfully maintain your position as Saints of the Most High.

INCIDENTS OF A MISSION.

BY ELDER C.

(Continued.)

SOON after the organization of the branch in L——, Mass., ELDER C. went to Boston, and called on a physician whom he had met on a former occasion. This physician urged him to consent to deliver an address before a literary society, of which the doctor was a member. ELDER C. consented, and the appointment was made. The society met in the drawing rooms of a gentleman named Mr. Baker, and by invitation, ELDER C. took tea with him on the afternoon of the appointment. As the hour for the meeting approached, members of the club commenced to drop in. The society seemed to have been composed of literary and professional people and spiritualists, and during the evening ELDER C. was introduced to about a dozen doctors, one or two lawyers, one or two writers, several spiritualists, and a number of other ladies and gentlemen, all of whom conversed with him freely and cordially. Soon there were assembled about fifty or sixty ladies and gentlemen, and Mr. Baker proceeded to open the meeting by singing a piece and playing an accompaniment on the piano. He then introduced ELDER C. to the audience.

It had been previously arranged that ELDER C. should talk on a certain principle of his religion ten, fifteen or twenty minutes, and then pause in his discourse to allow any one so disposed to ask any questions or present any objections relative to the doctrine or principle advanced. He would, after answering their questions or objections, proceed with another doctrine or principle of his religion, pausing to answer questions, etc. He commenced by describing the Godhead, then he spoke of the Holy Ghost as being the source of all light, truth, power and intelligence. Then, in succession, he set forth the principles of faith, repentance, baptism, revelation, inspiration, plural marriage, and, by request, described the views of the Latter day Saints with regard to co-operation

and the United Order. He soon discovered that he was addressing an audience of trained debaters, who did their utmost to present questions or objections which he could not answer. The principles which he advanced were successively scrutinized and in every instance he successfully met every argument offered against them. He was often surprised at his own answers, and felt that he was assisted by the Holy Ghost to combat the wisdom and learning of those present.

He stood this running fire for about three hours. He would have closed his remarks sooner, but the audience would not allow it, and when the meeting closed, a number of persons, among them several physicians, gathered around him and gave him their cards with urgent invitations to call. They expressed themselves highly entertained with his remarks and much surprised at his answers. One physician said to him: "ELDER C., on several occasions this evening I thought you were cornered. I could not see how you could answer the questions, but your answers came so readily and were so simple that I was astonished."

This occasion served to introduce ELDER C. into literary society in Boston, and he spent the following week in making calls upon literary and professional people to whom he became introduced, profiting much by his intercourse with them. But he saw so much infidelity and lax morality among this class that he vastly preferred the society of his own people even, though they were less learned and ostentatious than the *literati* of Boston.

(To be Continued.)

Biography.

JOSEPH SMITH, THE PROPHET.

(Continued.)

ON the sixth of April, 1841, the Nauvoo Legion assembled, and a procession was formed, which proceeded to the ground selected for the Temple. A hollow square was formed around the spot, and the superior officers of the Legion, the architects, principal speaker, etc., were conducted to the stand at the principal corner stone—the south east. After singing, Sidney Rigdon addressed the Assembly. His remarks were followed by singing and prayer. The architects then, by the direction of the First Presidency, lowered the first (S. E. corner) stone to its place, and Joseph pronounced the benediction. Sidney Rigdon followed in a prayer. After an adjournment for one hour the people again assembled, and the south-west corner stone was laid by the direction of the High Priesthood—Don Carlos Smith, Joseph's younger brother—and his counselors. The third, or north-west, corner stone was then laid under the direction of the High Council; and the fourth, or north east corner stone, was lowered to its place superintended by Bishop N. K. Whitney and the bishops. As each stone was placed in its position a prayer was offered and blessings were invoked upon it by the President of the quorum officiating.

This occasion was a time of much rejoicing for Joseph and the Saints. After all their sufferings from mobocracy they had at last reached a place where they could rest for a season and

commence the erection of a House of the Lord. The Lord had a great endowment in store for His Saints. A suitable house was necessary in which to bestow this endowment—a place where the holy ordinances of the gospel could be administered. The foundation stones were now laid, and many and fervent were the prayers which were offered up that the Saints might be permitted to complete it. Joseph was eager to push the work ahead. The people were sick and poor, and it seemed like a very heavy undertaking for so few people as there were there to attempt the erection of such a House. But God had commanded, and they stepped forth cheerfully to obey.

Joseph, in alluding to the proper manner of laying the foundation stones of temples, said: "If the strict order of the Priesthood were carried out in the building of Temples, the first stone would be laid at the south-east corner, by the First Presidency of the Church. The south-west corner should be laid next. The third or north-west corner next; and the fourth or north-east corner last. The First Presidency should lay the south east corner stone, and dictate who are the proper persons to lay the other corner stones. If a temple is built at a distance, and the First Presidency are not present, then the quorum of the Twelve Apostles are the persons to dictate the order for that Temple; and in the absence of the Twelve Apostles, then the Presidency of the Stake will lay the south-east corner stone; the Melchisedee Priesthood laying the corner stones on the east side of the Temple, and the lesser Priesthood those on the west side."

In laying the foundation stones of the Temple in this city the order laid down by Joseph was observed. But there was a quorum of the Twelve Apostles present, which there was not at laying the foundation stones at Nauvoo; they were absent in England. The first stone of the foundation of the Temple here was laid by the First Presidency. The second, the south-west, was laid by the Presiding Bishop, his council, and the various Presidencies of the lesser Priesthood. The third, the north-west, was laid by the President of the High Priest's quorum with his council, and the President of the High Council. The fourth, the north-east, was laid by the Twelve Apostles, the First Presidency of the Seventies and the Presidency of the Elders' quorum.

Thus, as President Young explained on the occasion, the First Presidency, who are Apostles, started at the south-east corner; "then the lesser Priesthood laid the second stone; we bring them into our ranks at the third stone, which the High Priests and Elders laid; we take them under our wing to the north-east corner stone, which the Twelve and Seventies laid; and there, again join the Apostleship. It circumscirbes every other Priesthood, for it is the Priesthood of Melchisedec, which is after the order of the Son of God."

(To be Continued.)

He has learned much, and has not lived in vain, who has practically discovered the most strict and necessary connection that does, and will ever exist, between vice and misery, virtue and happiness. The greatest miracle that the Almighty could perform, would be to make a bad man happy, even in heaven; he must "unparadise" that blessed place to accomplish it. In its primary signification, all vice, by certain fixed, settled, and established laws of Him who is the God of Nature, excess of every kind destroys that constitution, which temperance would preserve. The debauchee offers up his body a "living sacrifice" to sin.

PRACTICAL IMPROVEMENT.

THERE is a very practical kind of an improvement association at Ephraim City, in Sanpete County. It is composed of ninety members, stalwart and hardy, as well as talented, young fellows, who represent the "bone and muscle" of the settlement.

The aim of most improvement associations seems to be intellectual, moral, religion and social culture. That of Ephraim, while paying due attention to this sort of improvement has attempted something in addition, which is so commendable in its nature that is to be hoped success will attend the effort. It is no less object than that of establishing different branches of industry and providing manual employment for its members. True, there has not been a very great deal accomplished in this line yet, but sufficient has been done to indicate the tendency of the effort and what may be the final result. As "great oaks from little acorns grow," and some of the greatest and grandest enterprises have had small and apparently insignificant beginnings, the modest commencement made at Ephraim may eventuate in great accomplishments.

To start with, in December last, the members of the association turned out and built a lime kiln in the kanyon and burned five hundred bushels of excellent lime. This was done at a season when many of the members would probably have been idle if they had not been so employed. With the proceeds of that lime and some other means obtained by the members, they intend to buy a threshing machine, which, during the season of threshing, will furnish useful and profitable employment for quite a number of them. No other threshing machine could have a better claim upon the patronage of the people. The parents, of course, will all be interested in the prosperity of their sons, and give their machine the preference, so it is probable it will have plenty to do.

Brother A. C. Nielsen, the president, who is the prime mover in the enterprises of these young people, and who is an eminently practical man, gave to the association twenty acres of land. One third of this has been sown with lucern and one acre of it with hemp, with the fibre obtained from the hemp, they expect to manufacture cordage, which can be worked at during the winter season. When they can obtain a crop from the lucern the intention is to buy a few full-blooded Merino sheep to feed it to and with the wool obtained from them, and such furs as can be obtained, start a hat factory, which will also furnish employment during the winter season.

For the encouragement of the efforts the City corporation has granted the association two acres of land, upon which to erect a granary, factories, etc.

The work of fencing, clearing and planting their land has all been done by the members of the association, and in addition, they have fenced in an eight-acre field for the Relief Society.

A bid has lately been made for furnishing six thousand bushels, or more, of lime for the Manti Temple, the contract for which it is quite possible will be awarded to the association.

Establishing such branches of industry as these, and providing active employment for the members during the season of the year which is so frequently spent in idleness, are new features in the working of improvement associations. But they are very properly within their province, and every person who desires the welfare of the community will wish the Improvement Association of Ephraim success.

Questions and Answers

ON THE BOOK OF MORMON.

LESSON CXXXVIII

Q.—How were the plates shown to the three other witnesses by the power of God?

A.—A holy angel came down and turned the plates over in their sight, and they saw the engravings thereon.

Q.—What were they told?

A.—The voice of the Lord declared unto them that the engravings on the plates had been translated by the gift and power of God.

Q.—How many witnesses were there who saw these plates?

A.—There were twelve.

Q.—Who were they?

A.—The prophet Joseph, the eight witnesses to whom he was commanded to show them, who felt and handled them, and the three witnesses to whom they were shown by the angel.

Q.—Is there any other book on the earth sustained by such testimony?

A.—No; there is not.

Q.—Did these witnesses ever deny their testimony?

A.—No, they always maintained its truth and declared the Book of Mormon to be a true record, translated by the power of God.

Q.—Did any of them ever fall into darkness?

A.—Yes, and left the Church.

Q.—Can you tell me the names of the three witnesses?

A.—Oliver Cowdery, David Whitmer, Martin Harris.

Q.—Did they all remain in the Church?

A.—No, they all left the Church.

Q.—Did they waver in their testimony while they were out of the Church, concerning the Book of Mormon?

A.—No, they all constantly bore witness that what they had said concerning it was true.

ON THE BIBLE.

Q.—What did David do after he heard the promises which were made to him?

A.—He offered prayer and thanksgiving unto the Lord.

Q.—What did he next accomplish?

A.—He subdued the Philistines and the Moabites.

Q.—Whom next did he smite?

A.—The Syrians.

Q.—How many of them were slain?

A.—Twenty-two thousand.

Q.—What then did David do?

A.—He put garrisons in Syria.

Q.—What did the Syrians then become?

A.—Servants of David, and they brought gifts unto him.

Q.—What did Toi, king of Hamath, do, when he heard of David's victories?

A.—He sent Joram, his son, to salute him and bless him.

Q.—What did Joram present to David?

A.—Vessels of silver, gold and brass.

Q.—What did King David do with these?

A.—He dedicated them unto the Lord, with the silver and gold of all nations which he subdued.

Q.—In what other city did David place garrisons?

A.—Edom.

Q.—After these wars were ended, what did David do?

A.—He reigned over Israel, and executed judgment and justice unto all his people.

Q.—What positions did his sons hold?

A.—They were chief rulers.

Chapter for the Little Ones.

A LITTLE PRAYER.

MAM-MA, take me up and kiss me;
 Call me your own lit-tle son;
 And I'll tell you, mam-ma dar-ling,
 Where I've been and what I've done.
 When I saw the sun was set-ting,
 I stole soft-ly up the stair,
 And, be-side the emp-ty era-dle,
 Knelt and said a lit-tle pray-er.
 It was not the pray-er you taught me
 And sweet May, a-while a-go,
 When she spoke in ba-by whis-pers,
 Ah! so gen-tle and so low;
 But I'll tell you, if you'll lis-ten,
 What I prayed, with all my might—
 And I hope, dear, pre-cious mam-ma,
 You will say that it was right.
 I asked God to send a ba-by,
 Just as near like lit-tle May
 As His gra-cious heart could give us,
 And af-ford to let her stay.
 But I said, 'not quite so love-ly,
 And not quite so ver-y good;'
 And I asked that He would send her
 Just as quick-ly as He could.
 Please don't cry, my pre-cious mam-ma!
 Tears are fall-ing, though you smile;
 I am sure that God will an-swer,
 In a ver-y lit-tle while:
 For He has them al-ways read-y,
 And will know which one to spare;
 Such a dear kind lov-ing Fath-er,
 Sure-ly heard my lit-tle pray-er.
 Lula.

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OUR SULPHATES.

BY J. L. BARFOOT.

(Continued.)

NATURE has performed her operations on a grand scale in this region. Almost every variety of useful minerals abound. Besides large deposits of sulphur, sulphides and sulphates are very abundant. Some of our sulphur beds had their origin in precipitation from water, and some have been condensed from the sublimations of the sulphur itself, for sulphur is volatile. Our gypsum (sulphate of lime) has been formed in some places by the action of sulphuric acid upon lime stone. Carbonate of lime is changed into sulphate by sulphuric acid, which drives off the carbonic acid and takes its place. The sulphuric acid has its origin in sulphurated hydrogen, which, by the absorption of oxygen, becomes sulphuric acid.

Near the sulphur springs adjacent to this city lime has been changed from carbonate to sulphate by the percolation of water containing sulphuric acid in solution. The lime metal (calcium) is not the only one that can be acted on by sulphuric acid; the magnesia metal (magnesium), the soda metal (sodium), iron, copper, lead and other metals can also be acted on. Thus we have sulphate of iron frequently found mixed up with other iron compounds, pyrite, for instance; and sulphate of copper mixed with copper pyrites. By "leaching," as the new mode of dissolving out, metallic compounds is called, the sulphates can be dissolved out and the insoluble pyrite remains. If these insoluble materials are thrown away they gradually become soluble by the absorption of oxygen from the atmosphere. These chemical changes are going on all around us. All that the practical chemist does is to imitate the natural processes in such a way as to reap the advantages of natural operations.

All our soluble salts can thus be utilized. If we place them in water, they dissolve out; if we let the solution evaporate, crystals or salts will be found. If crystals are freed from impurities and re-dissolved, on being again crystallized they will be pure and marketable, or they can be made so. Its the business of the dry salter, or dealer in salts, to provide for the public the different salts. We can buy alums for a few cents per pound, but by making them we could buy them cheaper than those imported, and employ our own citizens in making them.

MUSIC CARDS, "Articles of Faith," Class Registers, and other publications suitable for Sunday schools for sale at this office.

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